Agenda items : E-1.2 & F-3.1

40th Argos Operations Committee meeting
Prepared by Marc COHEN, EUMETSAT
Date : June 14th, 2006

EUMETSAT POLAR SYSTEM
Status for OPSCOM

Space Segment

The Metop-2 satellite successfully passed its formal Flight Acceptance Review in July 2005, after which it entered storage awaiting the start of the preparation activities for the launch campaign (nominally planned for the start of 2006).

However, during tests on the Service Module for Metop-3, a problem was found with leaking flow control valves (FCVs) in the propulsion sub-system, which also affected Metop-2. This led to the test of all FCVs on Metop-2 and the replacement of three valves in December 2005 / January 2006.

In addition, a problem was found within the scan mechanism bearings of the AMSU-A1 instrument in March 2006, which required the instrument to be replaced by its back-up. The anomalous instrument was returned to its manufacturer in the US for investigations, which later confirmed this to be a generic problem affecting several instrument models, including both the AMSU-A1 and AMSU-A2 instruments mounted on Metop-2. Replacement instruments were made available by NOAA and shipped out to Baikonur in May, where they were successfully integrated, aligned and tested on the satellite in June.

The Metop-2 satellite was shipped to Baikonur on 20 April as separate Payload Module, Service Module and Solar Array elements. These elements were then integrated together and tested during April, May and June, such that all nominal activities have now been completed prior to fuelling the satellite, which is due to occur one month prior to the scheduled launch.

Ground Segment & System

The EPS Core Ground Segment (CGS) was made available to EUMETSAT in two stages: one chain being made available for integration and verification testing at the end of June 2005, and the complete system in October 2005 for formal validation testing. The CGS subsequently passed its formal acceptance review in December 2005.

Several System Satellite Validations Tests (SSVTs) have been successfully held over the past year. These have involved commanding the satellite in either Toulouse or Baikonur from the control centre in Darmstadt and have allowed the functionality of the Monitoring and Control System and the operational flight control procedures to be validated. Following the last SSVT in May 2006, which included the Metop-2 satellite in Baikonur, the system and procedures have been declared ready for launch.

The configuration EUMETSAT ground system was “frozen” at the end of May, prior to the start of formal rehearsals with the target operations team in June.

The LEOP service provider (ESOC in Darmstadt) has now successfully completed its readiness review and is ready to support the upcoming launch.

Overall, the space segment, ground segment, launcher and overall system are ready for the launch of the first Metop satellite on 17 July, following completion of the satellite fuelling and final satellite / launcher preparation activities in Baikonur.